

```

REGRESSION
  /DESCRIPTIVES MEAN STDDEV CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE ZPP
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Sales
  /METHOD=ENTER TargetPopulation PerCapitaIncome
  /PARTIALPLOT ALL
  /SCATTERPLOT=(*ZRESID ,*ZPRED)
  /RESIDUALS DURBIN NORMPROB(ZRESID)
  /CASEWISE PLOT(ZRESID) OUTLIERS(3)
  /SAVE PRED RESID ZRESID.

```

## Regression

### Notes

|                        |                           |                                                                             |
|------------------------|---------------------------|-----------------------------------------------------------------------------|
| Output Created         |                           | 12-Nov-2010 14:54:42                                                        |
| Comments               |                           |                                                                             |
| Input                  | Active Dataset            | DataSet0                                                                    |
|                        | Filter                    | <none>                                                                      |
|                        | Weight                    | <none>                                                                      |
|                        | Split File                | <none>                                                                      |
|                        | N of Rows in Working Data | 15                                                                          |
|                        | File                      |                                                                             |
| Missing Value Handling | Definition of Missing     | User-defined missing values are treated as missing.                         |
|                        | Cases Used                | Statistics are based on cases with no missing values for any variable used. |

Syntax

```
REGRESSION
  /DESCRIPTIVES MEAN STDDEV
CORR SIG N
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS CI(95)
R ANOVA COLLIN TOL CHANGE ZPP
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  /SCATTERPLOT=(*ZRESID
,*ZPRED)
  /RESIDUALS DURBIN
NORMPROB(ZRESID)
  /CASEWISE PLOT(ZRESID)
OUTLIERS(3)
  /SAVE PRED RESID ZRESID.
```

|                                  |                                                  |                                |
|----------------------------------|--------------------------------------------------|--------------------------------|
| Resources                        | Processor Time                                   | 00:00:00.969                   |
|                                  | Elapsed Time                                     | 00:00:01.718                   |
|                                  | Memory Required                                  | 1644 bytes                     |
|                                  | Additional Memory Required<br>for Residual Plots | 1280 bytes                     |
| Variables Created or<br>Modified | PRE_1                                            | Unstandardized Predicted Value |
|                                  | RES_1                                            | Unstandardized Residual        |
|                                  | ZRE_1                                            | Standardized Residual          |

[DataSet0]

**Descriptive Statistics**

|       | Mean    | Std. Deviation | N  |
|-------|---------|----------------|----|
| Sales | 150.60  | 62.049         | 15 |
| TP    | 241.73  | 116.830        | 15 |
| PCI   | 2961.87 | 730.637        | 15 |



|   |                   |      |      |       |      |          |   |
|---|-------------------|------|------|-------|------|----------|---|
| 1 | .999 <sup>a</sup> | .999 | .999 | 2.177 | .999 | 5679.466 | 2 |
|---|-------------------|------|------|-------|------|----------|---|

a. Predictors: (Constant), PCI, TP

b. Dependent Variable: Sales

**Model Summary<sup>b</sup>**

| Model | Change Statistics |               | Durbin-Watson |
|-------|-------------------|---------------|---------------|
|       | df2               | Sig. F Change |               |
| 1     | 12                | .000          | 2.701         |

b. Dependent Variable: Sales

**ANOVA<sup>b</sup>**

| Model |            | Sum of Squares | df | Mean Square | F        | Sig.              |
|-------|------------|----------------|----|-------------|----------|-------------------|
| 1     | Regression | 53844.716      | 2  | 26922.358   | 5679.466 | .000 <sup>a</sup> |
|       | Residual   | 56.884         | 12 | 4.740       |          |                   |
|       | Total      | 53901.600      | 14 |             |          |                   |

a. Predictors: (Constant), PCI, TP

b. Dependent Variable: Sales

**Coefficients<sup>a</sup>**

| Model |            | Unstandardized Coefficients |            | Standardized | t      | Sig. |
|-------|------------|-----------------------------|------------|--------------|--------|------|
|       |            | B                           | Std. Error | Coefficients |        |      |
|       |            |                             |            | Beta         |        |      |
| 1     | (Constant) | 3.453                       | 2.431      |              | 1.420  | .181 |
|       | TP         | .496                        | .006       | .934         | 81.924 | .000 |
|       | PCI        | .009                        | .001       | .108         | 9.502  | .000 |

a. Dependent Variable: Sales

**Coefficients<sup>a</sup>**

| Model |            | 95.0% Confidence Interval for B |             | Correlations |         |      |
|-------|------------|---------------------------------|-------------|--------------|---------|------|
|       |            | Lower Bound                     | Upper Bound | Zero-order   | Partial | Part |
| 1     | (Constant) | -1.843                          | 8.749       |              |         |      |
|       | TP         | .483                            | .509        | .995         | .999    | .768 |
|       | PCI        | .007                            | .011        | .639         | .940    | .089 |

a. Dependent Variable: Sales

**Coefficients<sup>a</sup>**

| Model |            | Collinearity Statistics |       |
|-------|------------|-------------------------|-------|
|       |            | Tolerance               | VIF   |
| 1     | (Constant) |                         |       |
|       | TP         | .677                    | 1.478 |
|       | PCI        | .677                    | 1.478 |

a. Dependent Variable: Sales

**Collinearity Diagnostics<sup>a</sup>**

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions |     |     |
|-------|-----------|------------|-----------------|----------------------|-----|-----|
|       |           |            |                 | (Constant)           | TP  | PCI |
| 1     | 1         | 2.878      | 1.000           | .01                  | .01 | .00 |
|       | 2         | .100       | 5.373           | .17                  | .77 | .02 |

|   |      |        |     |     |     |
|---|------|--------|-----|-----|-----|
| 3 | .023 | 11.261 | .82 | .22 | .98 |
|---|------|--------|-----|-----|-----|

a. Dependent Variable: Sales

**Residuals Statistics<sup>a</sup>**

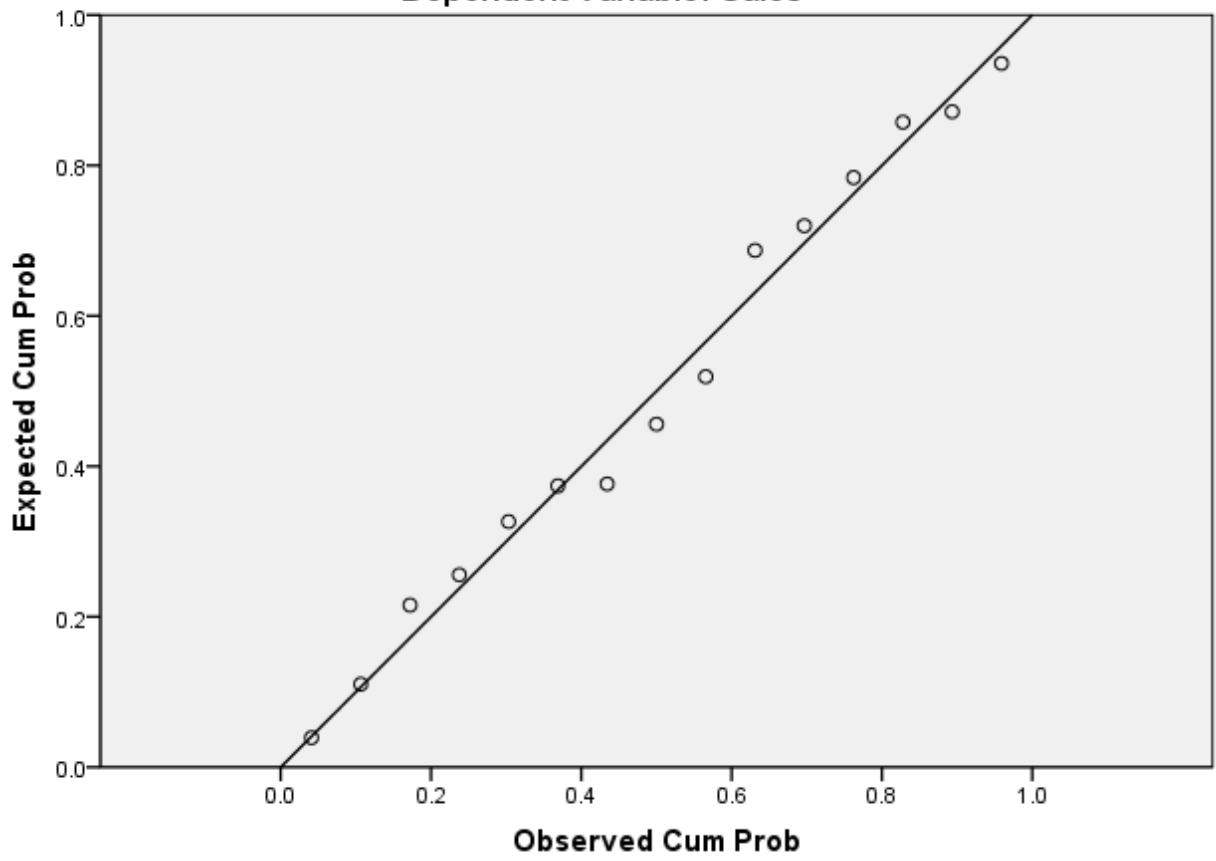
|                      | Minimum | Maximum | Mean   | Std. Deviation | N  |
|----------------------|---------|---------|--------|----------------|----|
| Predicted Value      | 53.29   | 253.72  | 150.60 | 62.017         | 15 |
| Residual             | -3.832  | 3.309   | .000   | 2.016          | 15 |
| Std. Predicted Value | -1.569  | 1.663   | .000   | 1.000          | 15 |
| Std. Residual        | -1.760  | 1.520   | .000   | .926           | 15 |

a. Dependent Variable: Sales

**Charts**

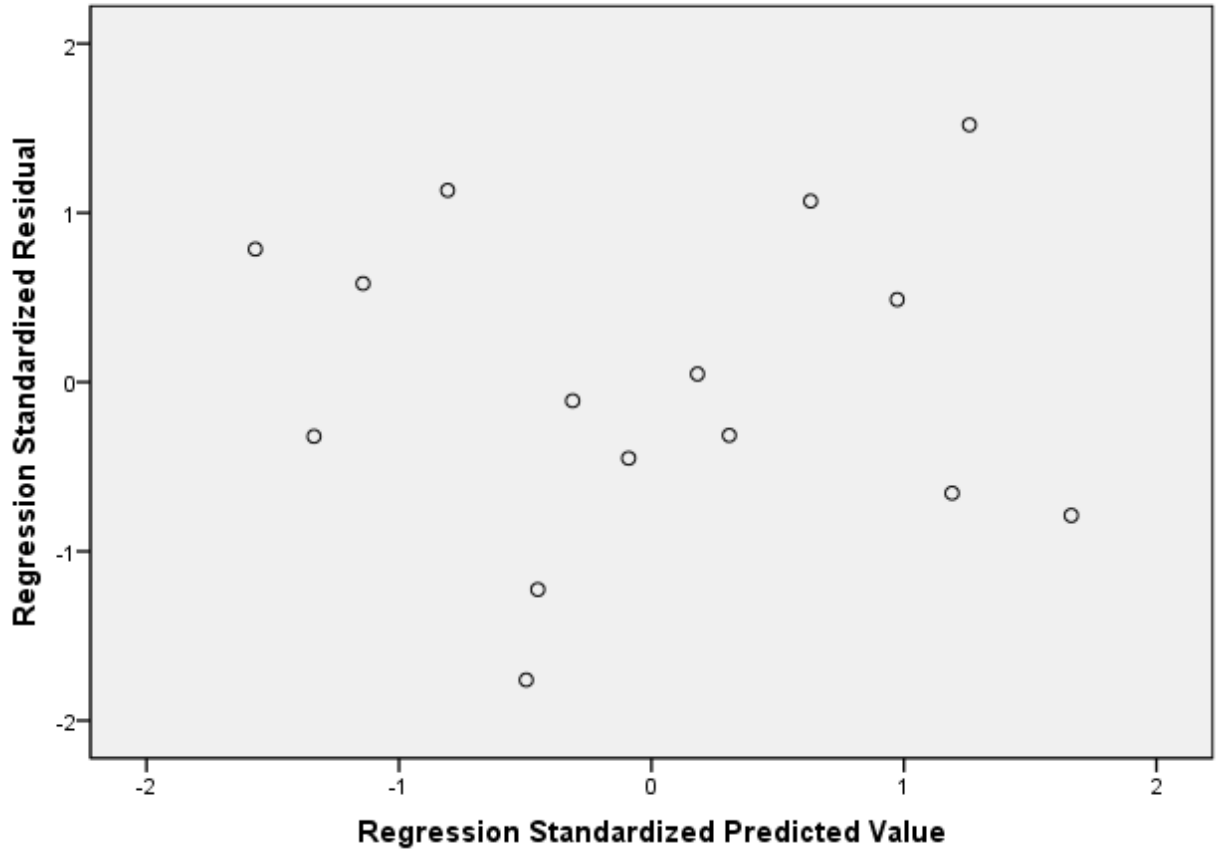
### Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Sales



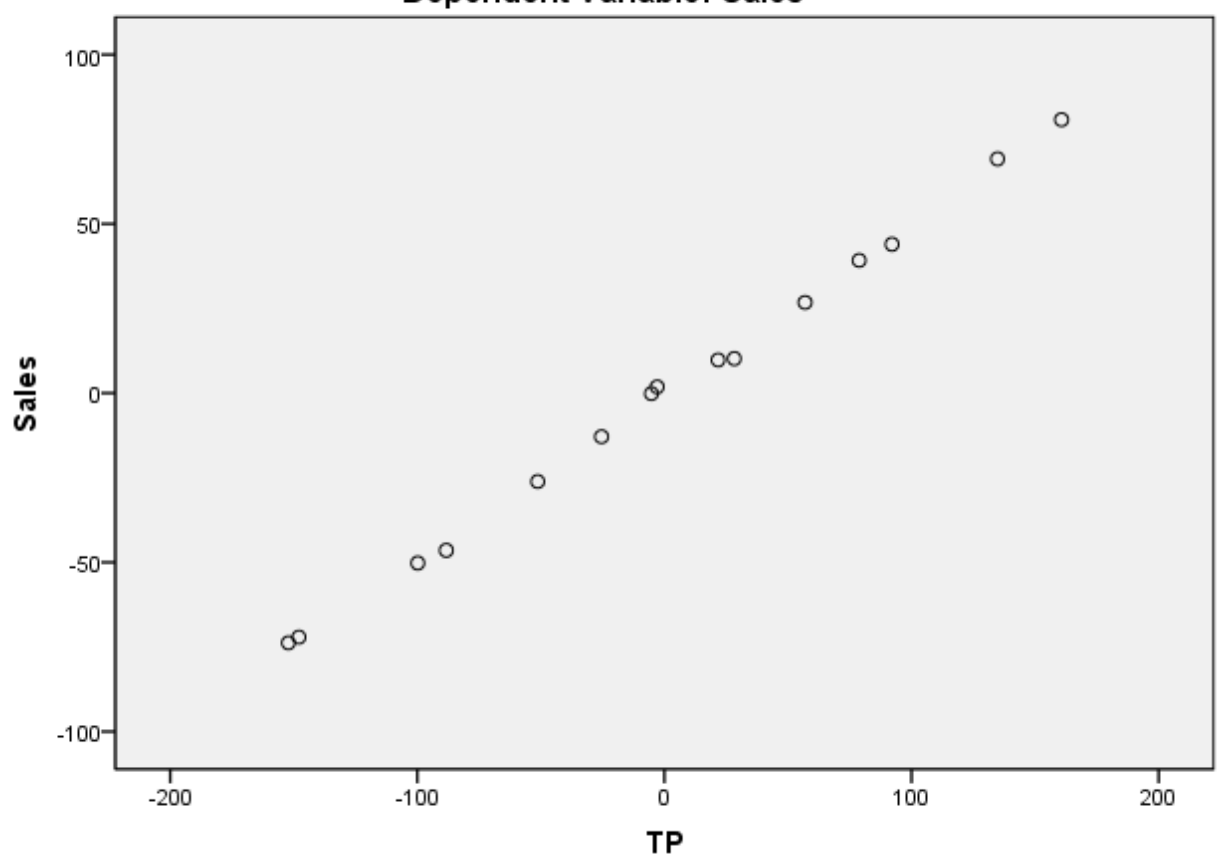
### Scatterplot

Dependent Variable: Sales





Partial Regression Plot  
Dependent Variable: Sales



Partial Regression Plot  
Dependent Variable: Sales

